

WE CLAIM:

- 1 1. A method for operating a converted vessel to perform drilling
2 operations, said method comprising:
3 receiving a floating drilling rig that is configured for drilling
4 operations while floating;
5 receiving a support barge component;
6 positioning the floating drilling rig over and affixing the floating
7 drilling rig to the support barge component thereby providing a converted
8 vessel operable to perform drilling operations while supported on a bottom of
9 a water body;
10 selectively filling a plurality of ballast tanks of the converted
11 vessel to ballast the converted vessel into contact with the bottom; and
12 performing drilling operations from the converted vessel while
13 the converted vessel is supported on the bottom.
- 1 2. The method of claim 1 further comprising, floating the converted
2 vessel in water that is shallower than the draft of the floating drilling rig.
- 1 3. The method of claim 1 wherein a footprint of the support barge
2 component is larger than a footprint of the floating drilling rig and the method
3 further comprises installing additional equipment on the support barge
4 component.
- 1 4. The method of claim 3 wherein the additional equipment is a
2 cabin.
- 1 5. The method of claim 1 further comprising, installing at least one
2 vertically movable post on the converted vessel operable to stab into the
3 bottom and laterally retain the converted vessel relative to the bottom.

1 6. The method of claim 5 wherein the at least one vertically
2 movable post is at least two vertically movable posts and the method further
3 comprises:
4 positioning the converted vessel about a drilling location;
5 stabbing one of the at least two vertically movable posts into the
6 bottom;
7 rotating the converted vessel about the vertically movable post stabbed
8 into the bottom; and
9 stabbing the remaining of the at least two vertically movable posts into
10 the bottom.

1 7. The method of claim 1 wherein the floating drilling rig is
2 classified for service in a defined body of water and the method further
3 comprises transporting the converted vessel outside the defined body of
4 water.

1 8. The method of claim 1 wherein the floating drilling rig is
2 classified for service in a defined body of water and the method further
3 comprises seeking subsequent classification of the converted vessel for
4 service outside of the defined body of water.

1 9. The method of claim 1 wherein positioning the floating drilling rig
2 over the support barge further comprises filling ballast tanks of the support
3 barge component with water until the support barge component is ballasted to
4 a depth that a top surface of the support barge component is at a lower depth
5 than a lower surface of the floating drilling rig.

1 10. The method of claim 1 further comprising, flowing water out of
2 outlets on a bottom of the support barge component to break suction formed
3 between the support barge component and the bottom of the water body.

1 11. The method of claim 1 further comprising, opening at least one
2 ballast tank of the support barge component to substantially freely
3 communicate with water about the converted vessel.

1 12. The method of claim 11 wherein opening at least one ballast
2 tank of the support barge component comprises opening a valve that allows
3 flow between the at least one ballast tank and the water about the converted
4 vessel.

1 13. The method of claim 11 further comprising, controlling an
2 amount of water in at least one ballast tank near a front of the support barge
3 component to control at least one of a front to rear trim and a port to starboard
4 trim of the converted vessel.

1 14. The method of claim 11 further comprising, opening at least one
2 ballast tank of the floating drilling rig to substantially freely communicate with
3 the water about the converted vessel.

1 15. The method of claim 1 further comprising, opening at least one
2 ballast tank of the floating drilling rig to substantially freely communicate with
3 the water about the converted vessel.

1 16. The method of claim 15 wherein opening at least one ballast
2 tank of the drilling rig comprises opening a valve that allows flow between the
3 at least one ballast tank and the water about the converted vessel.

1 17. The method of claim 1 further comprising, supplying power from
2 the floating drilling rig to the support barge component.

1 18. The method of claim 1 further comprising, supplying at least one
2 of machinery cooling water and fire fighting water to the floating drilling rig.

1 19. The method of claim 1 further comprising, separating the
2 support barge component from the floating drilling rig.

1 20. The method of claim 1 wherein selectively filling a plurality of
2 ballast tanks further comprises filling at least one ballast tank of the floating
3 drilling rig and at least one ballast tank of the support barge component.

1 21. The method of claim 1 wherein selectively filling a plurality of
2 ballast tanks of the converted vessel comprises, selectively filling a plurality of
3 ballast tanks of the converted vessel so that the converted vessel contacts the
4 bottom with a first load then adjusting the level in the ballast tanks so that the
5 converted vessel contacts the bottom with a second, lesser load than the first
6 load.

1 22. The method of claim 21 wherein a magnitude of the first load is
2 a function of at least one of a weight of the converted vessel, an
3 environmentally induced load, and a load due to drilling operations.

1 23. A method for converting a floating drilling rig component
2 configured for conducting drilling operations while floating to use in conducting
3 drilling operations while supported on a bottom of a water body, said method
4 comprising:
5 receiving a floating drilling rig component;
6 receiving a support barge component, said support barge
7 component adapted for attachment to the floating drilling rig component and
8 having a ballast system;
9 positioning the floating drilling rig component over and affixing
10 the floating drilling rig component to the support barge component, thereby
11 constructing a converted vessel operable to perform drilling operations while
12 supported on the bottom.

1 24. The method of claim 23 wherein the support barge component is
2 sized such that the converted vessel has a shallower draft than a draft of the
3 floating drilling rig component alone.

1 25. The method of claim 23 wherein the support barge component is
2 configured to contribute to a center of gravity of the converted vessel that
3 substantially minimizes the amount of ballast water needed for trimming the
4 converted vessel.

1 26. The method of claim 25 wherein the support barge is configured
2 to at least partially compensate for an eccentric center of gravity of the drilling
3 rig component.

1 27. The method of claim 23 wherein a footprint of the support barge
2 component is larger than a footprint of the floating drilling rig component and
3 the method further comprises installing additional equipment on the support
4 barge component.

1 28. The method of claim 23 further comprising, installing at least
2 one vertically movable post on the converted vessel, the at least one vertically
3 movable post operable to stab into the bottom and laterally retain the
4 converted vessel relative to the bottom.

1 29. The method of claim 23 wherein the floating drilling rig
2 component is classified for service in a defined body of water and the method
3 further comprises seeking classification of the converted vessel for service
4 outside of the defined body of water.

1 30. The method of claim 23 wherein the support barge component is
2 adapted to flow water out of outlets on the bottom of the support barge
3 component to break suction formed between the support barge component
4 and the bottom of the water body.

1 31. The method of claim 23 wherein the ballast system comprises a
2 plurality of ballast tanks, and wherein at least one of the ballast tanks is
3 adapted to substantially freely communicate with water about the converted
4 vessel.

1 32. The method of claim 23 wherein the support barge component is
2 adapted to contribute to a center of gravity of the converted vessel that is near
3 it's center of buoyancy.

1 33. The method of claim 23 wherein the support barge component is
2 adapted to provide at least one of electricity, machine cooling water, and fire
3 water to the floating drilling rig component.

1 34. A composite converted vessel for performing drilling operations
2 while supported on a bottom of a water body, comprising:
3 a floating drilling rig component having equipment for performing
4 drilling operations, said floating drilling rig configured for performing drilling
5 operations while floating; and
6 a support barge component attached to the floating drilling rig
7 component, the support barge component adapted to enable the composite
8 converted vessel to perform drilling operations while supported on the bottom
9 of the water body.

1 35. The converted vessel of claim 34 wherein the support barge
2 component is sized such that the converted vessel has a shallower draft than
3 a draft of the floating drilling rig component alone.

1 36. The converted vessel of claim 34 wherein the support barge
2 component has a larger footprint than a footprint of the floating drilling rig
3 component and at least one piece of equipment resides on the support barge
4 component.

1 37. The converted vessel of claim 34 further comprising at least one
2 vertically movable post disposed on the converted vessel said post operable
3 to stab into the bottom of the water body and retain the converted vessel
4 laterally relative to the bottom.

1 38. The converted vessel of claim 34 wherein the floating drilling rig
2 is classified for service in a defined body of water and the converted vessel is
3 classified for service outside of the defined body of water.

1 39. The converted vessel of claim 34 wherein the support barge
2 component has a plurality of ballast tanks and at least one of the ballast tanks
3 is adapted to be opened to water about the support barge component and
4 allow water to flow freely in and out of the ballast tanks.

1 40. The converted vessel of claim 34 wherein the floating drilling rig
2 component has a substantially planar bottom portion that abuts a substantially
3 planar deck portion of the support barge component.

1 41. The converted vessel of claim 34 wherein the support barge
2 component has a suction breaking system operable to flow water out of
3 outlets on a bottom of the support barge component to break suction formed
4 between the support barge component and the bottom of the water body.

1 42. The converted vessel of claim 34 wherein the support barge
2 component is adapted to contribute to a center of gravity of the converted
3 vessel being near a center of buoyancy of the converted vessel.